

ABSTRACT

An apparatus and method for inspecting and calculating the residual strength of an aramid fiber rope driving an elevator to determine when such rope is in need of replacement. The apparatus comprises a transmitter for introducing an acoustic wave that will travel along the aramid fiber rope and a plurality of receivers for receiving the acoustic wave after its has traversed a designated section of the rope. The transmitter and receiver provide signals indicating the times the wave was sent by the transmitter and thereafter received by the receiver. From these signals, a program calculates the wave velocity, and the modulus and residual strength of the aramid rope.